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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,519	09/26/2003	Todd Ames	2005.16	1181

29494 7590 03/31/2006

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EXAMINER

VANATTA, AMY B

ART UNIT PAPER NUMBER

3765

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,519

Applicant(s)

AMES ET AL.

Examiner

Amy B. Vanatta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 is confusing in claiming that a structural element (the means for spreading) "occurs prior to" another structural element. It is unclear how a device can "occur", since it is not a manipulative step, but rather is a structural element. It is suggested that more precise and clear terminology be recited, such as a recitation that the first element is located "upstream of" the second element. Also, the claim is confusing in reciting "The apparatus of claim 10 said means...". It appears that the word "wherein" is missing.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 2, 4, 8, 10, 11, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Document 60-26537 to Suzuki et al .

JP 60-26537 discloses a method and apparatus for making an absorbent composite including spreading a crimped tow in a direction perpendicular to the tow's travel by at least two banding jets (14 and 18). A step of deregistering the tow is performed by rollers 16a,16b and 17a,17b (see page 5, lines 19-26). The device 18 has "a guide to control the width of the tow" (see page 5, lines 29-31). This guide performs a step of shaping the deregistered tow as claimed. It is disclosed that the shaped tow is led to conveyor 19 to be covered with pulverized pulp 21 (page 5, lines 33-34). It is disclosed that this pulp may include absorbent polymer powder (page 5, lines 34-35), which is a "particulate" as claimed. This particulate (i.e. the powder mixed with the pulp) is distributed onto the shaped tow as in claim 1. Regarding the 35 U.S.C. 112, sixth paragraph "means plus function" limitations recited in claim 10, Suzuki discloses a means for spreading which comprises two banding jets (14 and 18), which is the same means for spreading disclosed by applicants. The means for deregistering the tow which is disclosed by Suzuki has the same structure for performing the same function as disclosed by applicant, that is, de-registering rollers (see rollers 16a, 16b, 17a, 17b). The means for shaping the deregistered tow (the guide disclosed by Suzuki) is equivalent to applicants' means for shaping, since the means for shaping of Suzuki performs the same function in the same way, and produces the same result, as the "means for shaping" of applicants. Spreader 20 forms a means for distributing

particulate onto the shaped tow, this spreading system appearing to be equivalent to the particulate distribution apparatus disclosed as the "means for distributing" of applicants.

The two banding jets 14 and 18 each have a width, as in claims 2 and 11. Compressed gas (air) is supplied to the banding jets as in claims 4 and 13 (page 5, line 18). Regarding claims 8 and 17, the tow is shaped to a substantially rectangular cross section as seen in Figs. 3A-3C.

5. Claims 1, 2, 4, 8-11, 13, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ames et al (US 6,253,431).

In US 6,253,431, Ames et al disclose a method and apparatus for making an absorbent composite including spreading a crimped tow in a direction perpendicular to the tow's travel by a first banding jet 130. The tow is deregistered by roller assemblies 40, 60, 70 (see col. 4, lines 21-25 and col. 5, lines 1-4). The apparatus includes an air opening device 240. The air opening device includes at a first end an air jet 248 which includes a source of compressed air 250 and an air manifold 254 through which the air is delivered to jet orifices 256 (col. 6, lines 21-45). This air partially opens and expands the tow so that it increases in cross-sectional area (col. 7, lines 8-17). Thus, the air jet 248 with orifices 256 forms a second banding jet which spreads the tow in a direction perpendicular to the tow's travel, as in claims 1 and 10. The forming chamber 260 and accumulating chamber 262 perform a step of shaping the deregistered tow as in claim 1, and form a means for shaping as in claim 10 (col. 6, lines 42-57). A particulate is distributed onto the shaped tow by assembly 120, as in claims 1 and 10. Regarding the

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35 U.S.C. 112, sixth paragraph "means plus function" limitations recited in claim 10, Ames discloses a means for spreading which is an air banding jet 130 which is the same means for spreading disclosed by applicants, and a second air jet 248 which appears to be equivalent to applicants' second banding jet since it performs the same function in the same way, and produces the same result, as the means for spreading of applicants. The means for deregistering the tow which is disclosed by Ames has the same structure for performing the same function as disclosed by applicant, that is, deregistering rollers (see roller assemblies 40,60,70 of Ames). The means for shaping the deregistered tow (240) disclosed by Ames is the same as the means for shaping disclosed by applicants (see page 11 of applicants' specification). A feeder 120 forms a means for distributing the particulate onto the tow. The feeder 120 of Ames appears to be equivalent to the particulate distribution apparatus disclosed as the "means for distributing" of applicants. The two banding jets (130, 248) each have a width, as in claims 2 and 11. Compressed gas (air) is supplied to the banding jets as in claims 4 and 13. Regarding claims 8 and 17, the tow is shaped to a substantially rectangular cross section (col. 6, lines 56-57). A liquid is applied to the tow by liquid additive assembly 80, as in claims 9 and 18.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-7 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 60-26537 to Suzuki et al.

JP 60-26537 discloses a method and apparatus as claimed, however the pressure of the compressed air which is supplied to the banding jets is not disclosed. It is within the ordinary skill in the art, however, to determine through routine experimentation the optimal pressure for the air of the banding jets depending upon the type and density of tow material which is being processed, and other parameters and conditions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to supply the compressed air of the method and apparatus of Suzuki et al at a pressure within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

8. Claims 5-7 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ames et al (US 6,253,431).

In US 6,253,431, Ames et al disclose a method and apparatus for making an absorbent composite as claimed, however the pressure of the compressed air which is supplied to the banding jets is not disclosed as being within the ranges recited in claims 5-7 and 14-16. It is within the ordinary skill in the art, however, to determine through routine experimentation the optimal pressure for the air of the opening jets depending upon the type and density of tow material which is being processed, and other

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parameters and conditions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to supply the compressed air of the method and apparatus of Ames et al at a pressure within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

9. Claims 1-18 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Ames et al (US 6,253,431) in view of Watson (US 3,796,035).

In US 6,253,431, Ames et al disclose a method and apparatus for making an absorbent composite including spreading a crimped tow in a direction perpendicular to the tow's travel by a first banding jet 130. The tow is deregistered by roller assemblies 40, 60, 70 (see col. 4, lines 21-25 and col. 5, lines 1-4). The forming chamber 260 and accumulating chamber 262 perform a step of shaping the deregistered tow as in claim 1, and form a means for shaping as in claim 10 (col. 6, lines 42-57). A particulate is distributed onto the shaped tow by assembly 120, as in claims 1 and 10. Regarding the 35 U.S.C. 112, sixth paragraph "means plus function" limitations recited in claim 10, Ames discloses a means for spreading which is an air banding jet 130 which is the same means for spreading disclosed by applicants. The means for deregistering the tow which is disclosed by Ames has the same structure for performing the same function as disclosed by applicant, that is, de-registering rollers (see roller assemblies 40,60,70 of Ames). The means for shaping the deregistered tow (240) disclosed by

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Ames is the same as the means for shaping disclosed by applicants (see page 11 of applicants' specification). A feeder 120 forms a means for distributing the particulate onto the tow. The feeder 120 of Ames appears to be equivalent to the particulate distribution apparatus disclosed as the "means for distributing" of applicants.

Regarding the recitation in claims 1 and 10 of "at least two banding jets", it appears that the air jet 248 forms a second banding jet. Assuming *arguendo* that the jet 248 is not a "banding jet" within the claimed meaning of the term, it is noted that providing a second banding jet which is separate and distinct from the other elements of the device is well known in the art. Watson (US 3796035) discloses a method and apparatus which includes at least two banding jets for spreading the tow. Specifically, Watson shows a first banding jet 13 for spreading the tow, and a second banding jet 24 for further spreading the tow to a wider width after deregistering the tow. Such banding jets are the same structure as disclosed in applicants' specification as the claimed 112, sixth paragraph "means for spreading". The two banding jets disclosed by Watson each have a width, as in claims 2 and 11, with the width of the downstream banding jet being greater, as in claims 3 and 12. One having routine skill in the art would recognize that it would be advantageous to provide a second banding jet in the method and apparatus of Ames et al to further widen the tow to a greater width, in the manner as taught by Watson, so that the tow is widened in increments so as to achieve a wider tow with less stress on the filaments, as is well known in the art. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide at least two banding jets in the method and apparatus of Ames et al in order to

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produce a wider tow which is incrementally spread, such as taught by Watson.

Compressed gas (air) is supplied to the banding jets of both Ames et al and Watson as in claims 4 and 13. Regarding claims 8 and 17, the tow of Ames et al is shaped to a substantially rectangular cross section (col. 6, lines 56-57). A liquid is applied to the tow by liquid additive assembly 80, as in claims 9 and 18.

Regarding claims 5-7 and 14-16, the pressure of the compressed air which is supplied to the banding jets of Ames is not disclosed as being within the ranges recited in claims 5-7 and 14-16. It is within the ordinary skill in the art, however, to determine through routine experimentation the optimal pressure for the air of the opening jets depending upon the type and density of tow material which is being processed, and other parameters and conditions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to supply the compressed air of the method and apparatus of Ames et al at a pressure within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

10. Claims 1, 2, 4, 8-11, 13, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 4,468,845) in view of Hawkins (US 3,262,181).

Harris discloses a method for making a tow product, which forms an "absorbent composite" to the extent claimed, including steps of spreading a crimped tow in a direction perpendicular to the tow's travel by two banding jets (20,22), de-registering the

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crimped tow (col. 4, lines 26-28), and shaping the de-registered tow (by device 28; col. 5, lines 2-21). Harris discloses an apparatus as claimed including a means (banding jets 20,22) for spreading a crimped tow, a means (rollers 24,26) for deregistering the tow, and a means (28) for shaping the deregistered tow. Regarding the 35 U.S.C. 112, sixth paragraph "means plus function" limitations recited in claim 10, Harris discloses a means for spreading which is two banding jets (20,22), as is the means for spreading disclosed by applicants. The means for deregistering the tow which is disclosed by Harris has the same structure for performing the same function as disclosed by applicant, that is, de-registering rollers 24,26. The means for shaping the deregistered tow disclosed by Harris is equivalent to applicants' means for shaping, the means for shaping (28) of Harris performing the same function in the same way, and producing the same result as the "means for shaping" of applicants. The tow is shaped to a substantially rectangular cross section (see rectangular shape of the shaping apparatus as disclosed in col. 2, line 55, and col. 4, line 62 through col. 5, line 18), as in claims 8 and 17. Regarding claims 9 and 18, a liquid (plasticizer from reservoir 94, which travels through pumps 90,92 to conduits 86,88 and then to applicator 72) is applied to the tow by a means for applying a liquid to the tow (72), which is equivalent to applicants' means for applying a liquid. The spreading by the use of the two banding jets (20,22) occurs prior to the deregistering (rollers 24,26), as in claim 19. The two banding jets (20,22) are positioned upstream ("prior to") the means for deregistering (24,26), as in claim 20. The banding jets (20,22) each inherently have a width, as in claims 2 and 11. The "jets" of the banding jets (20,22) are formed by pressurized fluid. Harris discloses

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that such a banding jet is described in US Patent No. 2,908,045 (see col. 3, line 66 of Harris), which patent discloses that compressed gas (air) is supplied to the banding jet (see col. 3, lines 3-5 of '045).

Harris does not disclose distributing a particulate onto the shaped tow by a means for distributing a particulate, as in claims 1 and 10. Both Harris and Hawkins disclose processes and devices for opening and treating crimped tow which is to be formed into tobacco smoke filter rods. Hawkins discloses that the particulate from feeder 70 is distributed onto the tow. Hawkins teaches that it is common to incorporate particulate additives into such tow before it is formed into filter rods in order to improve the properties of the tobacco smoke filters (col. 1, lines 15-19). Hawkins distributes the particulate onto the tow by feeder 70 while the tow is traveling through the blooming jet (col. 2, lines 4-17 and col. 3, lines 22-34). Particulate additives such as coloring agents, flavoring agents, and other substances are commonly added to such tow (col. 2, lines 11-17 of Hawkins). One having routine skill in the art would recognize that it would be advantageous to distribute particulate onto the tow of Harris by means of a feeder which connects to the blooming device 28 of Harris, in the manner shown by Hawkins, or by a conventional feeder which is provided just upstream of the blooming device of Harris, in order to provide the tow with agents such as coloring or flavoring agents before its formation into a filter rod. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to distribute particulate onto the shaped tow of Harris by means of a feeder, in order to supply the tow with coloring

or flavoring agents to produce a more desirable tobacco filter product, such as taught by Hawkins.

Response to Arguments

11. Applicant's arguments filed 12/7/05 have been fully considered but they are not persuasive. Applicant argues that neither Ames, Suzuki, nor Watson show at least two banding jets in use before de-registering. In response to this argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claims. That is, independent claims 1 and 10 do not recite that the two banding jets are used before deregistering. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Regarding apparatus claim 10, the claim merely requires at least two banding jets and a means for deregistering. The claim does not recite the relative positioning of these structures. The claim does not recite that the banding jets are upstream of the means for de-registering. Similarly, method claim 1 does not recite that the spreading by use of two banding jets is performed before the deregistering. See MPEP 2111.01, discussing that the words of a claim must be given their plain meaning unless they are defined in the specification. MPEP 2111.01 states that "Although the specification discussed only a single embodiment, the court held that it was improper to read a specific order of steps into method claims where, as a matter of logic or grammar, the language of the method claims did not

impose a specific order on the performance of the method steps, and the specification did not directly or implicitly require a particular order.” *Altiris Inc. v. Symantec Corp.*, 318 F.3d 1363, 1371, 65 USPQ2d 1865, 1869-70 (Fed. Cir. 2003). It is noted that newly added claims 19 and 20 do impose such an order on the method steps and elements of the apparatus. These claims are rejected as set forth in section 10 above.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 571-272-4995. The examiner can normally be reached on Monday through Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on 571-272-4983. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Amy B Vanatta
Primary Examiner
Art Unit 3765